

Consulting Team Introduction and Proposed Work Plan Overview

Massachusetts Net Metering Task Force
Mtg #2 - December 15, 2014



Sustainable Energy
Advantage, LLC



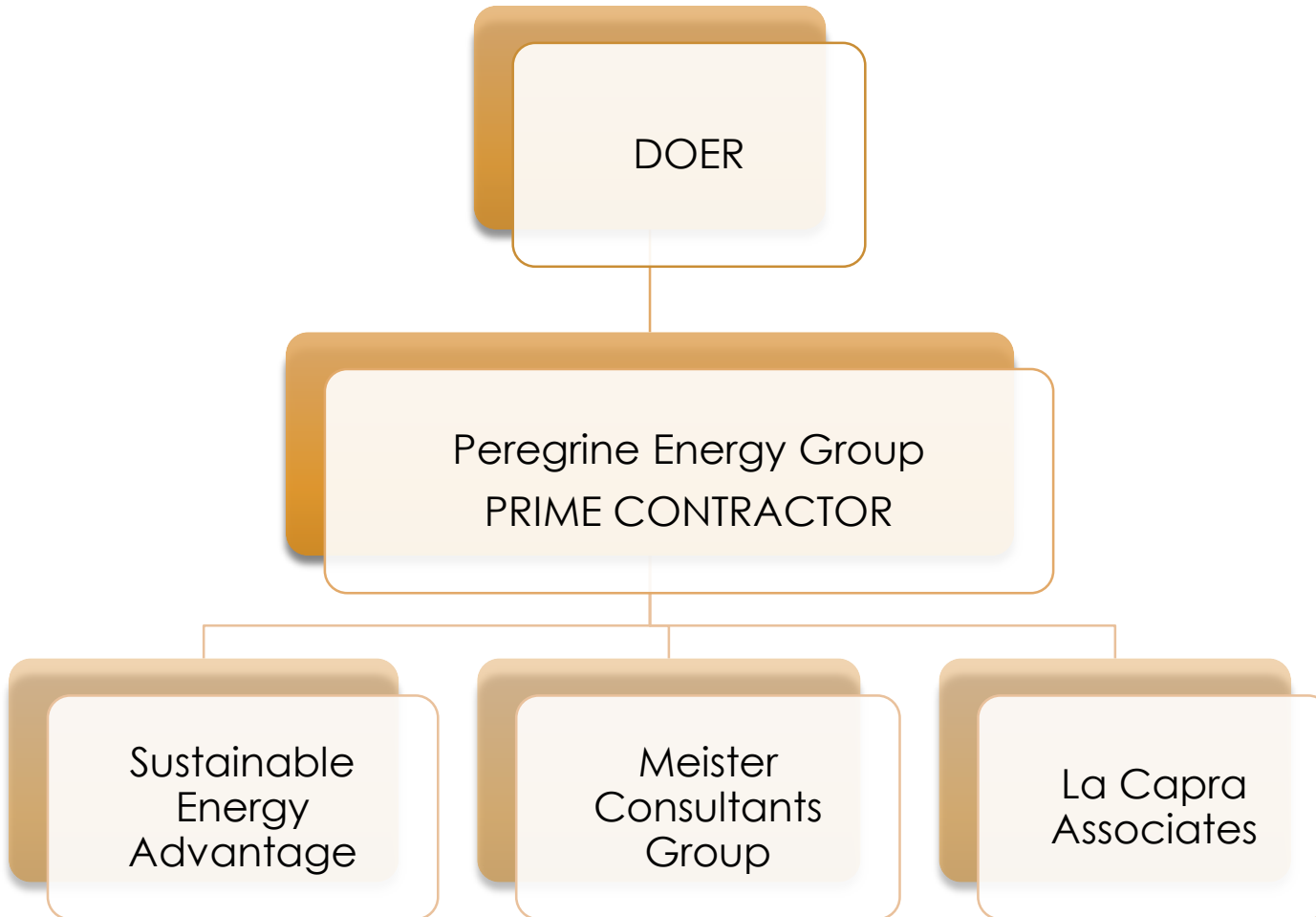
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Overview

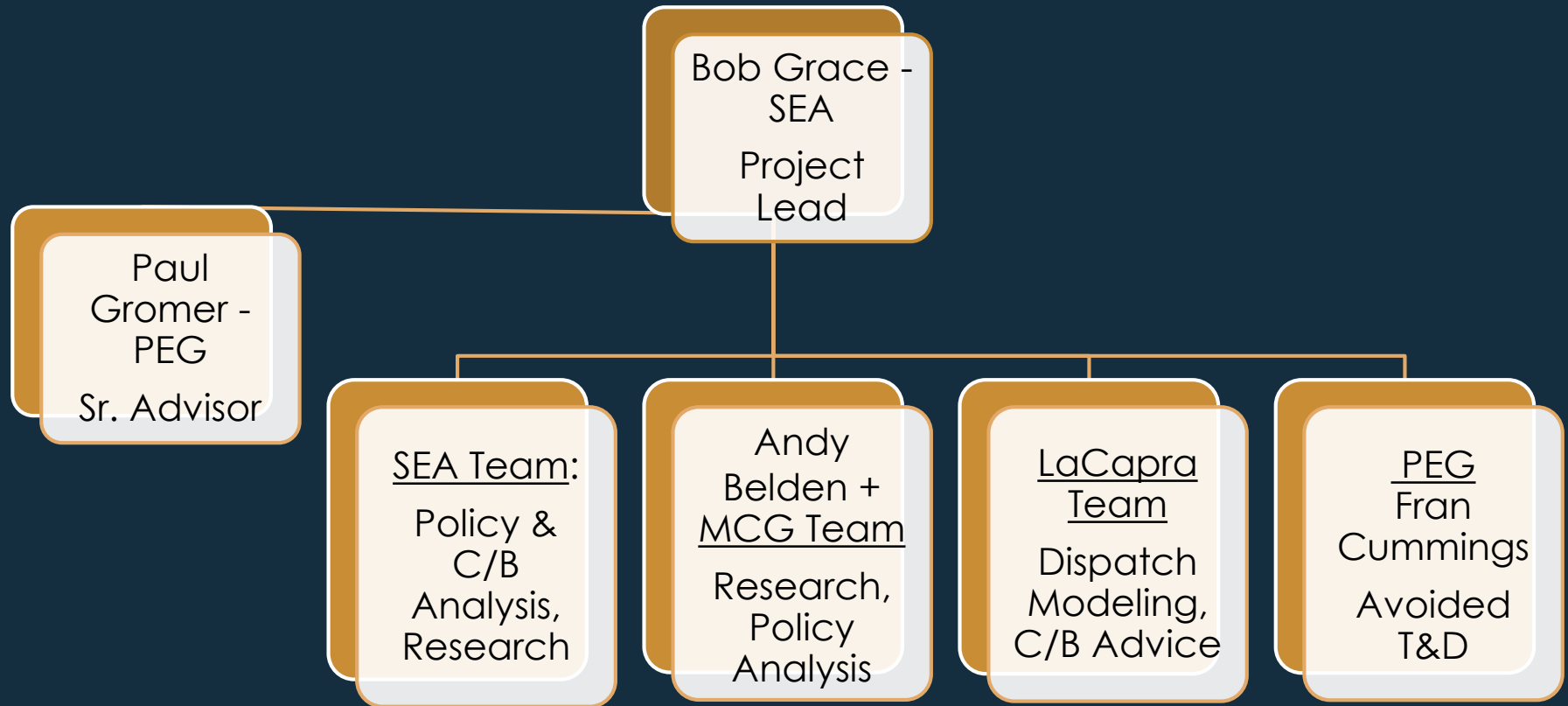
- Team Introduction
- Review of Work Plan, Scope and Timeline
- Overview of Other State Solar Policy & Net Metering Evolutions
- Interview Process
- Q&A



Consulting Team – Contractual Structure



Consulting Team – Functional Structure



Peregrine Energy Group

Peregrine Energy Group is an energy consulting firm based in Boston, Massachusetts.

We specialize in renewable energy, energy efficiency, and the collection, analysis, and presentation of energy data.

Our clients include state agencies, cities and towns, and owners of large portfolios of buildings.

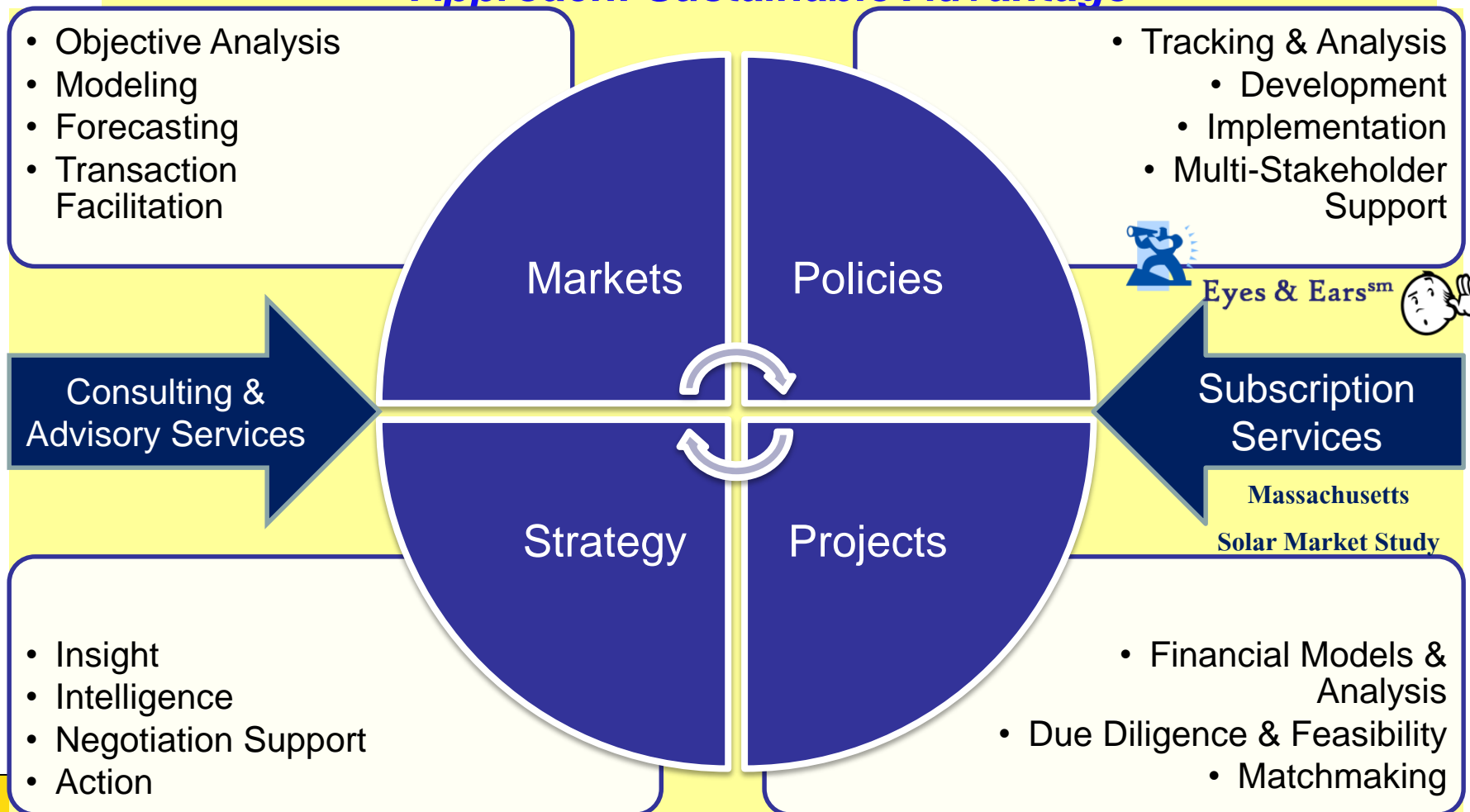




Sustainable Energy Advantage, LLC

Mission: Sustainable Energy

Approach: Sustainable Advantage





ABOUT MEISTER CONSULTANTS GROUP

Company Description

- International, Boston-headquartered consulting firm specializing in energy policy and strategy development
- Clients include state energy offices, local governments, international institutions, national labs, and the U.S. DOE.

Expertise

- Renewable Energy
- Energy Efficiency
- Climate Adaptation
- International Green Growth
- Corporate Sustainability

Services

- Market Research
- Policy Analysis
- Program Implementation
- Network Management
- Stakeholder Engagement
- Participation and Dialogue

Introduction to La Capra Associates: *About the Firm*

La Capra Associates is an employee-owned, independent consulting firm which has specialized in the electric and natural gas industries for more than 30 years.

Our expertise includes power portfolio planning, market policy and analysis (wholesale and retail), power procurement, economic/financial analysis of energy assets and contracts, and regulatory policy.

Our firm provides services to a range of organizations including:

- Public and Private Utilities,
- Energy Producers and Traders,
- Financial Institutions and Investors,
- Consumers, Regulatory Agencies
- Public Policy and Energy Research Organizations

La Capra Associates also has in-depth knowledge of renewable energy policy, markets and projects.

REVIEW OF WORK PLAN, SCOPE, AND TIMELINE



Tasks

- RFP Tasks:
 - Task 1: Solar Incentive Policy Summaries
 - Task 2: Solar Development in States without Solar Incentive Policies
 - Task 3: Analyze Costs & Benefits of MA Net Metering & Solar Incentive Policy
 - Task 4: Provide a Range of Options to Reach the 1600 MW Goal
 - Task 5: Minimum Bill Survey and Analysis
- Our proposal added two tasks (in RFP but without associated task):
 - Task 0: Interviews of Task Force Members & Other Stakeholders
 - Task 6: Task Force Participation, Interaction with DOER, and report drafting



Proposed Changes to Work Plan

- Conduct Interviews as Focus Groups
- Re-Order Parts of Task 4 & Task 3 → more productive approach
 - Identify and discuss policy options before selecting a subset to subject to detailed cost-benefit analyses
- Changes to Task Force meeting deliverables reflected in NMTF Framework
 - Staggered deliverables instead of complete draft → allows for iteration and narrowing policy options for analysis
 - 1 additional meeting in timeline → allows for feedback on policies & recommendation discussions
 - Refine spacing of later meetings (& avoid mid-Feb school vacations)



Task 1: Solar Incentive Policy Summaries

Proposed Policies and States Reviewed:

- California RE-MAT, RAM and declining block
- NYSERDA declining block program and solicitation program
- Rhode Island Renewable Energy Growth
- Delaware long-term contracting
- Connecticut ZREC
- New Jersey utility financing, ownership, & long-term contracting
- Vermont SPEED
- 'Value of Solar' Tariffs



Task 2: Solar Development in States w/o Incentives

- Identify states with similar potential solar market conditions as Massachusetts:
 - Electricity market structure and market prices
 - Solar insolation
 - No (or modest) solar incentives
- Develop profile of state solar market development
 - Characterize market drivers
 - Review growth over time
 - Compare development of solar in selected states to Massachusetts



Task 5: Minimum Bill Survey and Analysis

- Catalog states with minimum bill provisions
 - Analyze mechanism, structure and rate
 - Review impacts on solar market development
- Review proposed Massachusetts IOU minimum bill methodology
 - Compare to implementation in other states
 - Review proposed rates and integrate into previous task modeling



Task 3: Analyze Costs & Benefits of MA Net Metering & Solar Incentive Policy

- Analyze costs & benefits of current MA net metering & solar incentive policy
 - One entity's costs may be another's benefits
- Compare to (limited # of) other policies (developed in Task 4)
 - TF to provide input to screen down Task 4 'Policy Paths' to a subset for which cost and benefit modeling will be completed
- From several different perspectives



Task 3: *Proposed* Costs & Benefits (Quantitative)

- Direct cost of solar incentives in excess of commodity value
 - e.g., under current policy, solar carve-out compliance costs = $f(\text{target } \%, \text{load, load exemptions, unhedged REC supply @ spot SREC prices, self-supplied/hedged SREC purchased, ACPs})$
- Cost of net metering credits / net metering cross subsidy
- Wholesale energy market effects
 - i.e. energy clearing price suppression savings to ratepayers
 - But, transfer payment from the perspective of other generators
- Displaced RPS Class I compliance costs
- Avoided energy & generation capacity costs, as applicable
- Avoided T&D investment
- Customer savings from 3rd-party owners discounts to retail rates
- Avoided carbon and other emission effects.



Task 3: *Proposed Costs & Benefits*

- Benefits assessed in units other than dollars include reductions in use of imported fuels and quantities of avoided emissions of CO₂, NO_x and SO_x.
- Other *potential* quantitative:
 - Avoided or shifted costs for retail bill components
 - Tax implications of alternatives?
- *Potential* qualitative (from lit. review):
 - Anticipated impacts on jobs in Massachusetts
 - Anticipated impacts on energy resiliency



Task 3: *Proposed Perspectives*

- Project Team will consider costs & benefits from perspective of...
 - the customer-generator,
 - non-participating ratepayers, and
 - citizens of the commonwealth at large.
- Perspectives of other groups may also be of interest, e.g.,
 - non-solar generators
 - Utilities
- Observation: analysis of additional perspectives may put pressure on timeline and budget, so additional perspectives (if any) should be selected with care.
- What other perspectives are valuable to achieving TF's purpose?



Task 4: Provide a Range of Options to Reach (& exceed) the 1600 MW goal

- Based on research, analysis, findings from Tasks 0-2 & Task 5, input from Task Force, other stakeholders & public, we will “*provide a range of options for appropriate structures for providing support to reach the 1600 MW goal & provide opportunity for additional development.*”
- Option identification:
 - Options to adjust/modify current net metering &/or solar incentives capable of reducing costs without reducing benefits
 - Alternative structures for solar and/or net metering policy
 - Not constrained to 1600 MW by 2020
- Evaluation criteria for what might be deemed ‘appropriate’
- Screen and group policy ‘elements’ into (up to 6) ‘Policy Paths’
- Characterization of Options
 - Implications, where used, discernable affects, expected incremental costs & benefits, and potential interactions with other viable options

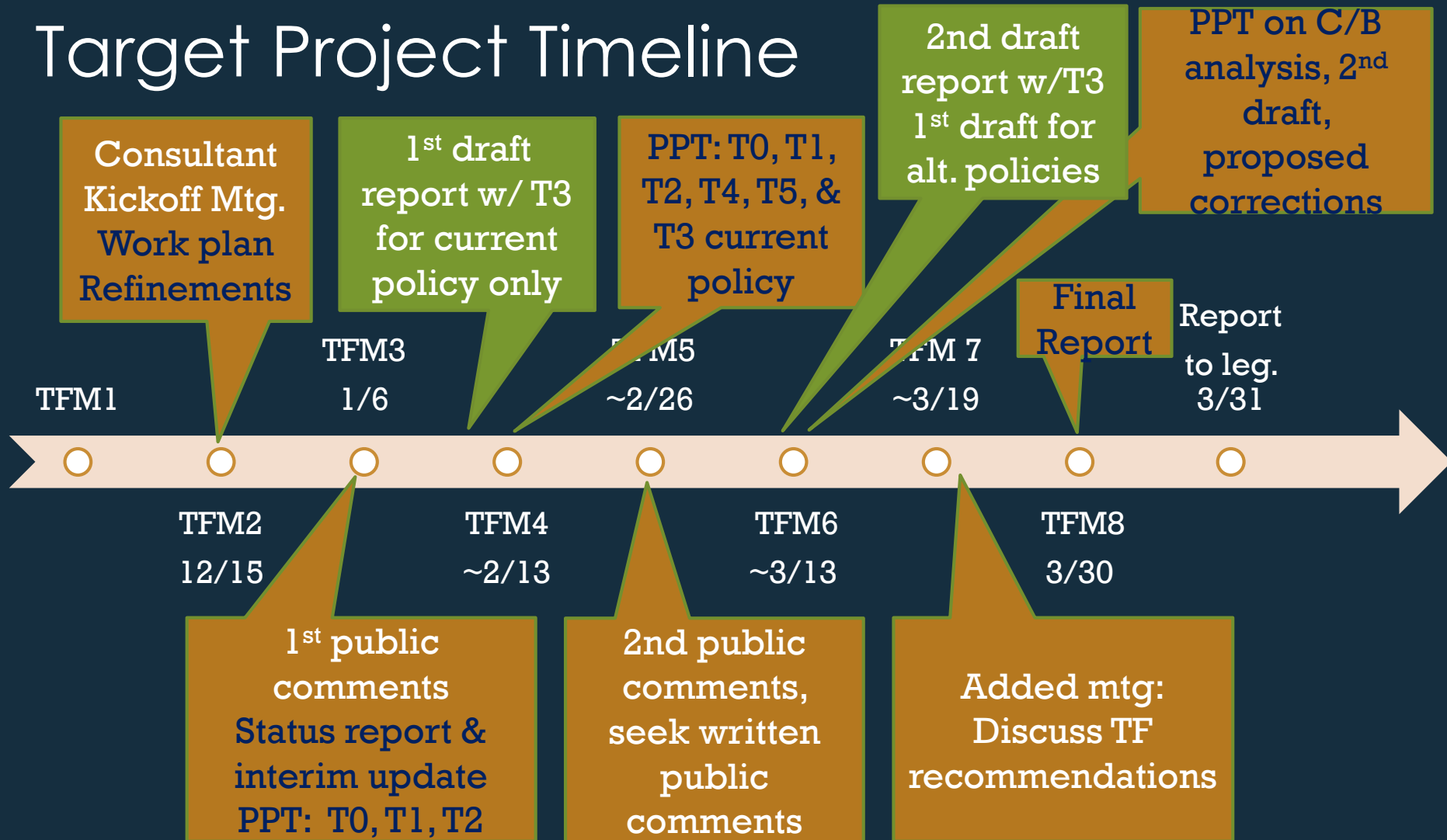


Task 6: Task Force Participation/Report Drafting

- Attend Public Meetings, participate in opportunities for Public Comment with Task Force.
- Review public comment in order to incorporate into final report.
- Roll Task deliverables into a consolidated final report to the legislature on behalf of the Task Force, including a list of policy options and analysis of those options.
- Draft report content reflecting the Task Force's recommendations to the legislature, attributed to the Task Force.



Target Project Timeline



- Vigilance required to streamline activities → hard report deadline



La Capra

Overview of Other State Solar Policy & Net Metering Evolutions

SPEED Std. Offer →
Competitive LT contracts;
Substantial NM cap increase

Low ACP Solar RPS tier
Enhancing Virtual Net
metering

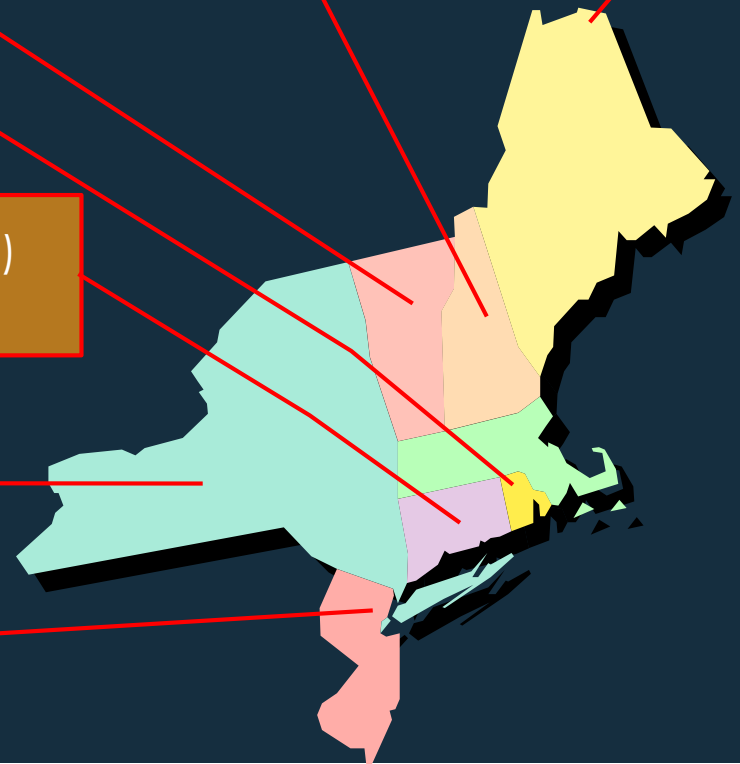
Value of Solar
Study

DG Std Offer → REG Long-Term Tariff (FIT for
small, competition for larger), Encompassing
NM Payment, Rate Design Review w/Min Bills

Competitive Long-Term REC Contracts (ZREC/LREC)
IRP: Open Proceeding to Determine Value of DG

Declining Block
Large-Scale Procurement?
Reforming the Energy Vision

Solar Volatility Study
Long-Term Contracting
Programs



TASK 0: INTERVIEW PROCESS



Task 0: Task Force Focus Groups

- Propose conducting 1.5 hr phone focus group sessions
- Five or six sessions based on task member representation
Task force member and/or designee to participate
- To address RFP's inclusion of "broader stakeholder participants", propose to add up to 5 others (Non-Task Force member participating entities) to ensure broad perspective

A	Utilities and Load Serving Entities
B	Utility Customers and Customer Advocates
C	Solar Industry Representatives
D	Legislators
E	Task Force Chairs
F	Other Potential Perspectives



Task 0: “Other” Focus Group Selection

- *Potential* missing perspectives →
 - Should other entity types be added or substituted?
- *Suggested* approach:
 - Individuals interested in participating should self-nominate (by 12/17)
 - If multiple self-nominations in same category – nominees to resolve (by 12/19)

Load Serving Entity
Solar Policy Research Org
Market Maker
Finance



Task 0: Illustrative Focus Group Groupings

TF Member or Other	Group	TF Member or Other	Group
Camilo Serna, Northeast Utilities	A	<i>Other: Solar policy research org*</i>	C
Amy Rabinowitz, National Grid	A	C. Stolle Singleton, Franklin, MA	D
<i>Other: Load Serving Entity*</i>	A	Benjamin B. Downing, Senator	D
Paul Brennan, AG's Office	B	Brian S. Dempsey, Representative	D
David Colton, Easton Town Admin.	B	Eric J. Krathwohl, Rich May, P.C.	D
Robert Rio, AIM	B	Kate McKeever, DPU; Task Force Co-Chair	E
Charles Harak, NCLC	B	Meg Lusardi, DOER; Task Force Co-Chair	E
William Stillinger, PV Squared	C	Lisa Podgurski, IBEW Local 103	F
Fred Zalcman, SunEdison & SEIA	C	<i>Other: Finance*</i>	F
Janet Besser, NECEC	C	<i>Other: Market Maker*</i>	F
Geoff Chapin, Next Step Living	C	<i>Other: TBD*</i>	F

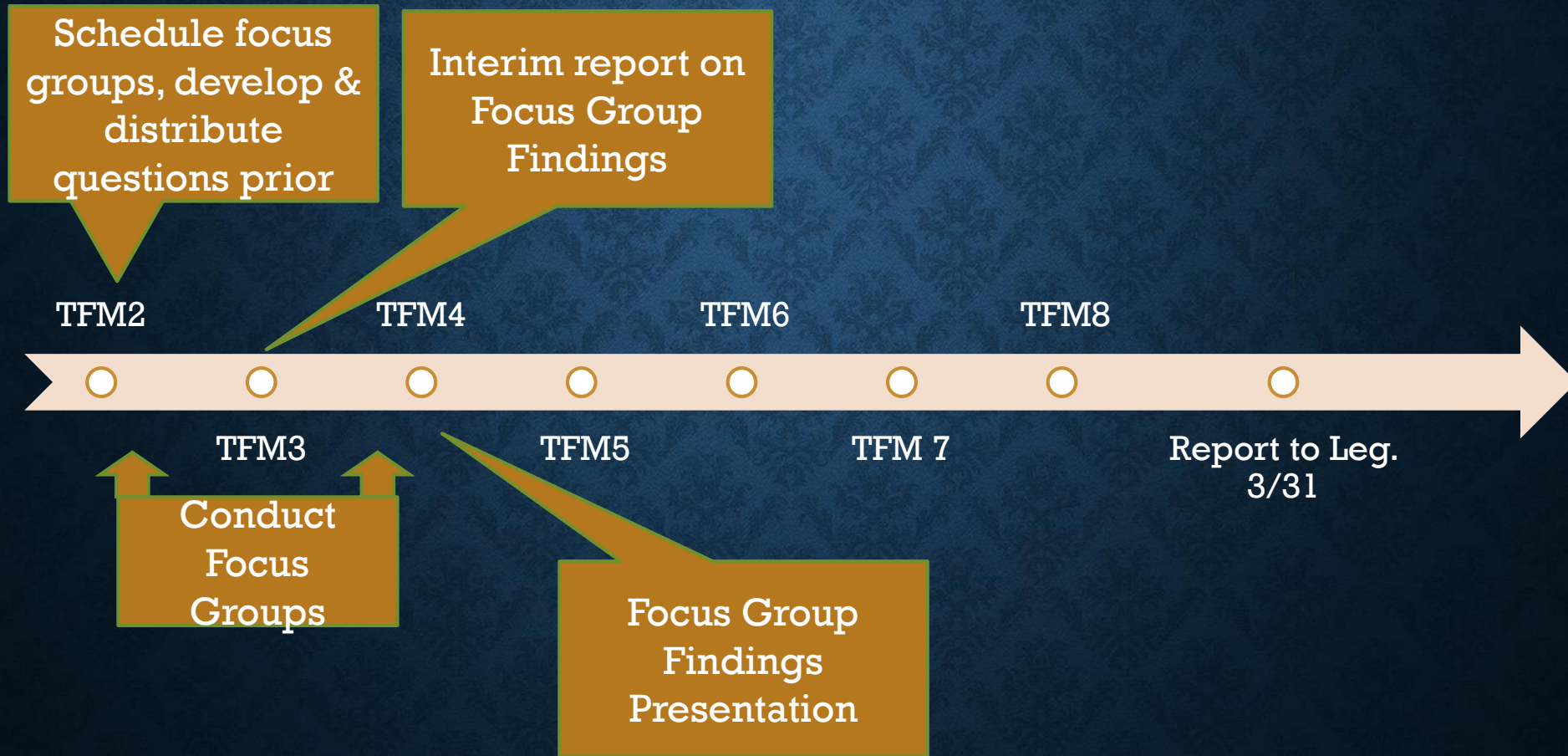


Task 0: Task Force Focus Group Interview Topics

- Perspectives on current solar market model
- Perspectives on current net metering approach
- Long-term goals for Mass. solar market
- Perspectives on other solar incentive models:
 - Standard offer
 - Declining block
 - Competitive procurements
- Perspectives on future use of net metering, min. bill provisions
- Future policy and incentive options discussions/brainstorming
- *Sector-specific* inquiries(TBD) incl. specific requests to aid analysis
- Other?



TASK 0: TASK FORCE FOCUS GROUPS



Wrap Up

- Q&A
- We look forward to supporting your mission!

